Math 1497 Calculus II − Sample Test

1. $\displaystyle\int \tan^{-1} x \, dx$

2. $\displaystyle\int \frac{\ln x}{x^2} \, dx$

3. $\displaystyle\int_0^1 x e^x \, dx$

4. $\displaystyle\int \tan^3 x \sec^4 x \, dx$

5. $\displaystyle\int_0^1 \frac{dx}{\sqrt{1-x^2}}$

6. $\displaystyle\int_1^5 \ln x \, dx$

7. $\displaystyle\int \sec^3 x \, dx$

8. $\displaystyle\int_{-3}^3 \frac{dx}{4-x^2}$

9. $\displaystyle\int \sin^2 x \cos^3 x \, dx$

10. $\displaystyle\int_0^\infty x e^{-x^2} \, dx$

11. $\displaystyle\int \cos^3 x \, dx$

12. $\displaystyle\int_{\pi/4}^{\pi/3} \tan^2 x \sec^2 x \, dx$

13. $\displaystyle\int \frac{dx}{(x^2+4)^{3/2}}$

14. $\displaystyle\int_1^{\sqrt{3}} \frac{dx}{x\sqrt{x^2+1}}$

15. $\displaystyle\int \frac{dx}{\sqrt{x^2-4}}$

16. $\displaystyle\int \frac{dx}{x^2+3x+2}$

17. $\displaystyle\int_0^{\frac{1}{2}} \frac{x^3 \, dx}{\sqrt{1-x^2}}$

18. $\displaystyle\int \frac{x^2 \, dx}{(x^2+1)^{3/2}}$

19. $\displaystyle\int \frac{2x-1}{(x-1)(x-2)^2} \, dx$

20. $\displaystyle\int \sin^5 x \cos^4 x \, dx$

21. $\displaystyle\int \frac{1}{x^3+x} \, dx$

22. $\displaystyle\int \sin^2 x \cos^2 x \, dx$

23. $\displaystyle\int_{-\infty}^\infty \frac{dx}{x^4} \, dx$

24. $\displaystyle\int \frac{4x^2-x+7}{(x-1)(x^2+4)} \, dx$

25. $\displaystyle\int_0^\infty \frac{dx}{\sqrt{x+1}}$

26. $\displaystyle\int \tan^3 x \sec^3 x \, dx$

27. $\displaystyle\int_{-1}^2 \frac{dx}{x-2}$

28. $\displaystyle\int \frac{1}{x^2\sqrt{x^2-9}} \, dx$

29. $\displaystyle\int \frac{x^3}{\sqrt{x^2+9}} \, dx$

30. $\displaystyle\int_{\sqrt{2}}^2 \frac{x^5 \, dx}{\sqrt{x^2-1}}$